This section includes a description of immediate actions recommended on SR 303L to improve safety and reduce serious traffic crashes on the existing interim SR 303L roadway. Also included is a description of the MAG Plan, projected funding and next steps needed in the project development process. The last section of this section describes what is expected to be built based on the MAG plan and funding program and provides some considerations for programming construction of the highway corridor.

13.1 IMMEDIATE SAFETY IMPROVEMENTS ON EXISTING SR 303L

As part of the preparation of this DCR, a safety study was conducted on existing SR 303L that resulted in the preparation of the *Final Draft SR 303 Safety Study* report dated March 19, 2004. This report was developed in cooperation with the Project Advisory Committee formed specifically for this effort. The committee had representatives from MCDOT, ADOT, Goodyear, Surprise, and the Maricopa County Sheriff's Office. Traffic accident history was tabulated and analyzed and the existing roadway was extensively reviewed. The following recommendations were made:

Immediate Implementation Items

The following actions should be under taken using existing MCDOT maintenance budget and county forces:

- Clear any obstructions in the sight triangles at all stop-controlled intersections
- Provide wide (24-inch) stop bars on all minor road approaches
- Install/repair rumble strips on intersections approaches
- Install/restripe pavement messages, such as STOP AHEAD at all stop-controlled intersections.
- Replace/repair damaged signs at all intersections.
- Install oversized stop signs at all unsignalized intersections where standard sized signs exist.
- Adjust signal timing to create gaps at stop-controlled intersections.
- Increase public awareness on aggressive driving and other safety precautions.

Recommendations that Require Additional Funding

The following actions require a new funding source that has not been identified:

- Increase speed enforcement through assignment of additional patrol officers or through installation of automated speed enforcement equipment (very high benefit cost ratio)
- Construct passing lanes where needed.
- If freeway construction is delayed, widen the roadway to four lanes (see Interim B, Section 10.9)

13.2 FUNDING AND PROGRAMMING SCENARIOS

This section provides a summary of the funding as identified in the *MAG Regional Transportation Plan* and approved by the voters through Proposition 400 in November 2004. The last portion of this section identifies the basic steps needed to advance the corridor development process to prepare for construction.

Funding Identified in the MAG Plan

The *MAG Regional Transportation Plan* was adopted November 25, 2003 and contained an expanded system of freeways, arterials, bus service and light rail transit. Funding for the transportation system will come from continued federal funds, state highway user revenues and an extension of the existing ½-cent sales tax for transportation in Maricopa County. A total of $15.819 billion is needed for the plan of which 53.7% is expected to come from the ½-cent sales tax.

In February 2004, the Arizona Legislature passed and the governor signed a bill that authorized a public vote on Proposition 400 on November 2, 2004 in Maricopa County for the continuation of the ½-cent sales tax. Proposition 400 was approved, thus providing funds for SR 303L.

SR 303L is included in the MAG Plan to be constructed as a six-lane freeway by 2026 from MC 85 to I-17. Funds based on 2002 dollars for this route are programmed in the plan as follows:

Section of SR 303L	Phase I 2006-2010	Phase II 2011-2015	Phase III 2016-2020	Phase IV 2021-2026	Total
MC 85 to I-10		$10	$220		$230
I-10 to US 60	$50	$495			$545
US 60 to I-17	$250	$395			$645
Total	$300	$900	$220		$1,420

Note: Dollar amounts in millions of 2002 dollars.

The general expectations from the funding allocation is that in Phase I the remainder of the right-of-way would be acquired and some interim improvements could be made on the I-10 to US 60 section of SR 303L. The bulk of the initial construction would be completed in Phase II.

The widening of I-10 from Dysart Road to SR 303L is also important to the SR 303L project. I-10 needs to be realigned to the north to accommodate the SR 303L interchange and I-10 needs to be widen from the

existing two lanes in each direction in order to handle the existing traffic and projected future traffic. The MAG plan has programmed $66 million for general purpose lane widening and $28 million for HOV lanes for I-10 in Phase II.

Funding Sources for SR 303L

The total cost of SR 303L as presented in Chapter 14 exceeds the funds allocated by MAG for this section of the roadway. The costs are based on 2005 construction cost unit prices that experienced an extraordinary increase in 2004 and 2005. The fund allocation was based on 2002 dollars, so it will also increase as sales tax revenues increase with growth and inflation. It is not known at this time whether the fund allocation will grow faster or slower than the cost increases. This revenue/cost balancing is dealt with in the ADOT Life Cycle Program that has Legislative oversight.

The funds for the section of SR 303L included in this DCR could come from a variety of sources. The bulk of the funds will come from the MAG RTP allocation for the I-10 to US 60 segment. This DCR also includes all of the US 60 interchange extending into the US 60 to I-17 section of SR 303L. Similarly, the I-10 interchange extends into the I-10 Reliever to I-10 section of SR 303L. Some of the funds from those other two sections should be used for cost identified in this DCR.

The I-10/SR 303L interchange may be attributed partly to SR 303L and partly to the I-10 portion of the MAG RTP. Similarly, some of the US 60 interchange could be attributed to the US 60 widening project in the MAG RTP. Likewise, the Northern Parkway interchange might be partially funded from the Parkway project.

The off-site drainage system that consists of a channel on the west side of SR 303L from Bell Road to the Gila River and a series of detention basins was developed as part of the overall flood control plan for the area. The FCDMC has indicated that they will pay for a portion of the cost and a cost allocation report was prepared as part of this DCR process.

In 2006, the State Legislature established the Statewide Transportation Acceleration Needs (STAN) fund. MAG recommended and the State Transportation Board included in the FY08-12 MAG Area Life Cycle Construction Program for FY08 $9.2 million for cross road improvements at Cactus and Waddell Roads and $11 million to construct the Bell Road TI.

Programmed Improvements

In the most recent ADOT Five-Year Program (FY09-13), ADOT has programmed the following funds for SR 303L, I-10 to US 60:

Right-of-way Acquisition	$11.0 million	FY09-10
Design	$7.2 million	FY09-10
Construction Roadway	$474.8 million	FY11-13
Construct I-10 Realign/303 TI	$135.0 million	FY11
	$628.0 million	

Additional funding is expected to be programmed in subsequent years.

Next Steps in Corridor Development Process

The products of this DCR/EA process are plans developed to approximately the 15% level of design. ADOT has indicated its intention to take over responsibility for the design, construction and operation of SR 303L by July 2006. Corridor development will proceed under ADOT direction in cooperation with FHWA, MCDOT, FCDMC, Goodyear, Glendale, Surprise and many other agencies. ADOT has hired a corridor management consultant to assist them in the overall development of SR 303L from MC 85 to I-17.

The primary steps needed to continue the corridor development process are as follows:

- Complete the 15% DCR and EA and obtain a “Finding of No Significant Impact” from FHWA.
- ADOT to formally take responsibility of SR 303 from MC 85 to I-17 and to obtain an intergovernmental agreement with MCDOT for the transfer of ownership and operation of the existing interim facilities and all right-of-way (completed July 2006).
- Prepare a funding plan and cash flow plan for SR 303L.
- ADOT’s corridor management consultant will advance the design plans to 30% level of completion.
- Review service interchange configurations and modify, as appropriate, based upon input from local jurisdictions, cost analysis, earthwork balance, drainage and utility issues, updated traffic forecasts based upon the most up-to-date adopted development plans and other considerations.
- Acquire additional right-of-way needed to preserve the corridor

- Prepare a sequence of construction plan for the corridor based upon traffic and safety needs, cost/funding comparisons, off-site drainage system, earthwork, maintenance of traffic flow, project delivery method.
- ADOT to select the most suitable project delivery method (or combination of methods) for the corridor including design-bid-build, design-build, CM at risk or other potential methods. Identify corridor segments that fit the selected delivery method(s).
- Proceed as needed with the relocation of wells and utilities after the 30% plans are completed and funding is available.
- Prepare intergovernmental agreements between ADOT and FCDMC for the design, construction and maintenance of the off-site drainage system.
- Prepare intergovernmental agreements between ADOT and local jurisdictions for cross streets and service interchanges including traffic signal operation, signage, electrical power, lighting and maintenance.
- Prepare agreements with BNSF and with RID for roadways and structures affected their facilities and right-of-way.
- Prepare agreements with utility companies and local governments for the relocation of utilities and placement of utilities on bridge structures where needed.
- Develop plans to the 30% stage for the section from MC 85 to Van Buren Street when the location and nature of connection to the planned SR 801 “I-10 Reliever” is known.
- ADOT to select designers and contractors to proceed with implementation of the corridor based upon the cash flow plan, selected project delivery method, and corridor sequence plan.

13.3 INITIAL FREEWAY CONSTRUCTION

The *MAG Regional Transportation Plan* adopted on November 25, 2003 includes SR 303L as a six-lane freeway from MC 85 to I-17. The I-10 to US 60 segment is earmarked for funding in Phase II (2011 to 2015). This plan establishes the basis for defining the initial freeway construction.

Major Roadway Features

The initial freeway construction is expected to consist of six lanes of the ultimate 10-lane freeway. It was decided during the course of this study to first construct the outside lanes (lanes 3, 4, and 5) plus the auxiliary lane where needed. Refer to Figure 11-1. This initial freeway construction differs from that used by ADOT in the construction of SR 101L and most of SR 202L. On those two routes, ADOT constructed lanes 2, 3, and 4 as the initial construction. In many locations ADOT is now adding the auxiliary lane. The cost of adding a lane on the outside has proven to be quite expensive due to the need to modify ramps, and relocate drainage features, lighting and FMS. Further widening in the future to provide lane 5 will also be a great cost. The standard median in the SR 101 and 202 initial construction is 46 feet wide (including the paved inside shoulders). Due to the high incidence of vehicles crossing through these medians, ADOT has installed cable barrier.

The initial freeway construction proposed in this DCR (lanes 3, 4, and 5) plus auxiliary lanes would permanently establish the outside edge of pavement including the outside drainage features, FMS, lighting, ramp gores, etc. The resulting median would be 74 feet wide thereby reducing the potential for vehicles to cross through the median as compared to SR 101 and 202.

The open median would be graded as a swale and catch basins and storm drains would be installed where needed. Overhead sign structures may be installed in the median but would have to be protected with crash cushions or barrier. Lighting for the initial freeway construction would be placed along the outside of the travelway.

The initial freeway construction would consist of a full access controlled grade separated freeway. Grade separations or service interchanges would be included at each section line roadway. There are a total of 13 section line roads from McDowell Road to Bell Road (inclusive). Between Bell Road and Grand Avenue, two grade separations have already been constructed (at Clearview Boulevard and Mountain View Boulevard).

The MAG phasing plan includes SR 303L from I-10 northward in Phase II and the MC 85 to I-10 in Phase III. Accordingly, the initial freeway construction would include the north half of the I-10/SR 303L system interchange but not the south half. The plans for this system interchange include realigning I-10 from Sarival Avenue to Citrus Road. As a result, the I-10 work should precede or be constructed concurrent with the SR 303L system interchange.

The system interchange for the Northern Parkway may or may not be included in the initial freeway construction depending upon the availability of funding and the status of the planned parkway. The MAG phasing plan includes $50 million (2002 dollars) for Northern Parkway between SR 303L and Dysart Road for right-of-way protection and interim road construction. Local jurisdictions are to provide a 30% match to these regional funds. Additional funds for Northern Parkway are included in Phases III and IV. If the parkway is constructed to a suitable level by Phase II, then it would be appropriate to construct the system interchange on SR 303L to connect the two routes. ADOT has indicated that the system interchange might be funded from the SR 303L regional funds rather than the Northern Parkway funds that would only be 70% regional.

If the Northern Parkway system interchange is not constructed in Phase II, then the planned split diamond interchanges at Northern Avenue and Olive Avenue connected by one-way frontage roads would provide access to the interim Northern Parkway via Sarival Avenue.

The US 60 interchange is projected to be quite expensive ($149 million plus right-of-way and design). If adequate funds are not available in Phase II, construction of this interchange may be postponed. The existing SR 303L bridge over Grand and the railroad can accommodate two lanes of traffic in each direction. A connecting road is provided between SR 303L and Grand Avenue and a signal has been installed on SR 303L. Depending upon the rate of urban development in the northwest portion of the metropolitan area, this interim interchange may be able to meet the needs for a few years.

Regional Off-Site Drainage System

As described in Chapter 6, the off-site drainage system has been planned by the FCDMC through the preparation of the *Loop 303/White Tanks Area Drainage Master Plan Update (ADMP)*. This plan includes a series of channels on the west side of SR 303L and a series of detention basins with some bleed-off connections to drainage facilities to the east. This system extends from the Gila River to Bell Road and will serve as the off-site drainage system for the freeway.

Construction of the off-site drainage system must occur concurrent with or in advance of construction of the freeway. Funding for the system is planned to be shared between FCDMC and regional highway funds. An analysis of the shared costs is provided in the supporting document *Drainage System Cost Sharing Analusis Report.* Funding for construction, maintenance and operations need to be developed through an intergovernmental agreement between ADOT and FCDMC.

It appears that the off-site drainage system can be constructed in segments. Based upon the ability to store the storm water in the detention basins and release the water to interim downstream facilities. There are two major end points in the drainage system: Camelback Road and the Gila River. Ideally, the drainage system would be constructed to end at one of those points. There are a total of seven separate potential end points that may be possible to use as interim drainage system termination. The segments from south to north are as follows: (1) Gila River to I-10; (2) I-10 to Camelback Road; (3) Camelback Road to Northern Avenue; (4) Northern Avenue to Cactus Road, (5) Cactus Road to Bell Road, (6) Bell Road to Mountain View, and (7) Mountain View to US 60. Considerable additional analysis is needed before it can be determined what modifications would be needed to use any one of these segments to temporarily end the drainage system construction. Identification of these sections provides input into the determination of a logical sequence of construction plan to be developed in a later date.

Phased Development Considerations

With the passage of Proposition 400 in November 2004, funding for SR 303L is provided. The phased development plan will be prepared by the ADOT management consultant. The MAG RTP allocates most of the funding in Phase II for SR 303L from I-10 to US 60.

Preparation of a phasing plan for construction of SR 303L should consider the following elements:

- Ability to advance funding for SR 303L to Phase I of MAG plan
- Cash flow estimates on annual basis
- Ability to advance funding for I-10 widening to coincide with or precede SR 303L funding
- Availability of funding from FCDMC for their share of the off-site drainage system.
- Traffic flows on the existing interim SR 303L in comparison with roadway capacity.
- Traffic crash and fatality history by section of roadway
- Off-site drainage sections that can be constructed independently of other sections.
- Earthwork balance and avoid the need to borrow.
- Willingness of local governments or developers to loan or contribute funding for certain sections.
- Pavement condition of the existing interim roadway.
- Ability to transition newly constructed freeway sections of SR 303L back to the existing interim roadway or onto other roadways in the area.
- Length and cost of sections that match the project delivery method chosen by ADOT.
- Availability of right-of-way.
- Ability to relocate wells and utilities in advance of highway construction.
- Timing by local governments of improvements to cross streets and parallel streets.
- Ability to get agreements with BNSF, RID, FCDMC, utility companies and local governments.

Based on current knowledge and assumptions regarding activities in the next few years, the following is one potential scenario for sequencing the construction of SR 303L. The limits of the sections assume that ADOT would design and construct SR 303L in a manner similar to that used on SR 202L where contracts were divided into 2 to 4 mile sections with construction cost typically in the $40 to $70 million range.

The following construction sequence is based upon the assumption that funding availability leads toward building from north to south. In order to do so, it must be possible to build the off-site drainage system from north to south. This sequence is unusual since normally one would build from the Gila River northward in order to provide a secure outfall for the storm water.

To construct the highway and off-site drainage system from north to south, some additional analysis will be needed. The rapid development of the area changes the off-site drainage flows so that updated analyses will be needed prior to final design. If the section from Bell to Cactus is built first, the outflow from the detention basin at Cactus should not be greater than the predicted flows prior to construction. Actions that may be needed to accomplish this outflow limitation are to oversize the detention basins, limit the outflow capacity, and provide for outflow facilities developed to accommodate the more concentrated flows from the basins. Similar techniques would be used as the roadway and off-site drainage system is constructed segment by segment from north to south.

The construction is proposed to start south of US 60 and progress from north to south. This sequence would postpone the construction of the US 60 interchange but provide a four-lane divided roadway south of US 60. From Bell Road southward, the construction would be the initial freeway construction consisting of permanent pavement, full grade separations/interchanges, and off-site drainage system. South of Bell Road, the construction would include three lanes of traffic plus an auxiliary lane in each direction between one-mile spaced service interchanges. The cross streets would be constructed within the freeway right-of-way limits with tapers to the cross street roadway that exists at the time of the construction.

The following is a list of the construction sequence steps that are illustrated in Figure 13-1.

1. Construct permanent two northbound lanes from Bell Road to south of US 60. Taper lanes to utilize existing Patriots Bridge (four-lanes) for two-way traffic.
2. Construct six-lane freeway from Bell Road to Cactus Road with the off-site drainage system extending south to the Camelback Road detention basins.
3. Construct six-lane freeway from Cactus Road to Northern Avenue including the Northern Parkway TI.
4. Construct six-lane freeway from Northern Avenue to Camelback Road.
5. Construct six-lane freeway from Camelback Road to Thomas Road and extend the drainage system to the Gila River.
6. Construct north half of I-10 system interchange using the sequence of construction concept shown in Appendix B as a guideline.
7. Construct six-lane freeway from Bell to US 60 and the US 60 interchange.

The phasing as presented appears feasible from an earthwork viewpoint due to the large regional detention basins throughout the corridor. These basins are fairly evenly spaced along SR 303L and provide one to two million cubic yards of material each. The excess material generated by each phase could be placed in or near locations where embankment would be needed in later phases.

Note that if I-10 is widened before SR 303L construction starts, modifications will be needed in the suggested sequence plan for the I-10/SR 303 system interchange shown in Appendix B.

Refinements to the sequence and the limits of each section may be made as cost estimates, earthwork quantities, off-site drainage interim system operational analysis, availability of right-of-way and agreements, and cash flow analyses.

13.4 STAKEHOLDER ANALYSIS

The following is a summary of the level of concurrence received from the agency stakeholders:

- MCDOT—High level of concurrence based upon approval of this DCR for distribution.
- ADOT—High level of concurrence based upon review and comments received on this DCR.
- FCDMC—High level of concurrence based upon participation in meetings and incorporation of the ADMP off-site drainage system as a jointly funded portion of the roadway project.
- FHWA—High level of concurrence based upon review and comments received on this DCR and eventual approval of the *Change of Access Report.*
- City of Goodyear—High level of concurrence based upon input on I-10 system interchange configuration and keeping Indian School Road and Camelback Road at-grade with SR 303L elevated.
- City of Glendale—High level of concurrence based upon input on Northern Parkway system interchange.
- City of Surprise—Concurrence based upon participation in meetings and keeping Peoria Avenue, Cactus Road, and Waddell Road at-grade with SR 303L elevated. With major development proposed, the City would like consideration of SPUI interchanges at Cactus and Waddell roads. The City requests consideration of potentially extending Northern Parkway westward across SR 303L. Some elected officials favor a lower-type facility than the proposed freeway.
- BNSF—Concurrence based upon written and verbal response to concepts for utilization of portions of their right-of-way, concepts for ramps crossing under the railroad, horizontal and vertical clearances, and concept for shoo-fly during construction.

- RID—Concurrence based upon direct communication regarding concepts for SR 303L crossing of canal south of I-10.
- MWD—Concurrence based upon coordination regarding well relocations.
- AWD—Concurrence based upon coordination regarding well relocations and relocating of supply line on eastern edge of freeway south of Northern.
- State Land Department/Perryville Prison—Concurrence based upon coordination regarding placement of detention basins on property owned by State Land and occupied by the prison.

A public meeting was held in May 2004. There was acceptance by most of the general public and property owners.

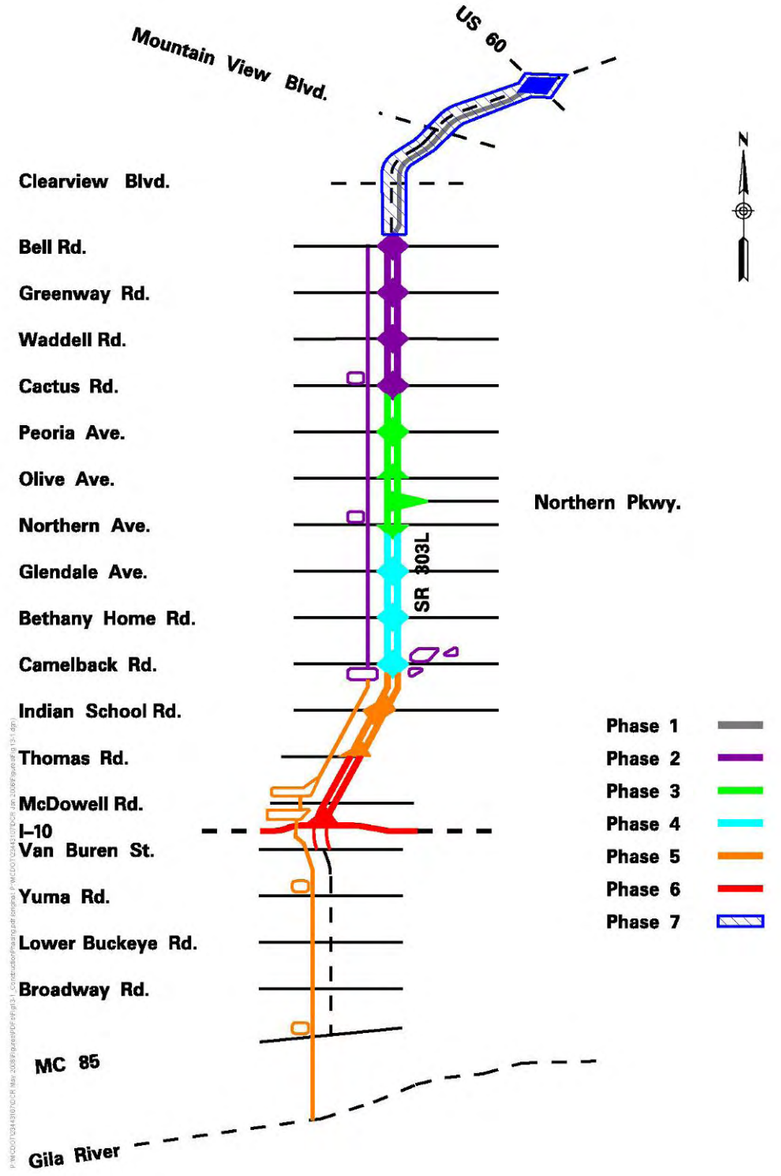

Figure 13-1 Potential Construction Phasing